



CPC Salary Survey

A study of 1985-86 beginning offers/Preliminary Report December 1985

The falling dollar, the potential budget deficit cuts, and a continued easy-money policy by the Federal Reserve Board have all contributed to optimistic economic forecasts for 1986.

Although projections by business economists during the economic recovery have run the gamut from boom to impending doom, the majority of forecasters are now in agreement that the current modest expansion will continue through 1986.

The Preliminary Salary Survey report seems to support that view. Seventeen disciplines at the bachelor's level had sufficient reporting volume for the changes from last year's closing figures to be meaningful. Of those, twelve reported increases in starting salary offers since July, with the majority experiencing solid gains of 2 percent to 3 percent.

In terms of dollar value of offers, little has changed at the top. Petroleum engineering and chemical engineering continued to fill the first- and second-place positions, gaining 3.8 percent and 2.6 percent, respectively, since July.

Two disciplines bear special mention. The first is electrical engineering, which reported a drop in starting salary. The current monthly average of \$2,267 is 0.7 percent below July's figure. With increases reported in most of the other engineering disciplines, it was surprising that this high-demand field did not follow suit.

It's the opposite situation with the second case—computer science. After receiving below-average increases throughout last year, this discipline got off to an impressive start this year with a 4.1 percent salary increase since July.

The overall drop in the number of offers from a year ago may appear significant but should not necessarily be cause for concern at this early reading. Changes in the reporting forms (see below) and a shorter lead time for schools to submit data have probably affected the volume of data.

The CPC Salary Survey report continues to evolve and expand to meet the information needs of our constituents.

There are two major changes for this reporting year:

- A standard classification system for categorizing and defining categories has been adopted;
- Data have been collected on an expanded number of categories.

This means that several new categories have been added, a few have undergone name changes, and several have been split to provide more precise reporting. Complete definitions for occupational titles and employer categories are provided on pages 8 and 9.

The CPC Preliminary report covers the period from September 1 to December 6. The data include offers extended to students graduating between September 1, 1985, and August 31, 1986. There are 183 placement offices at 161 colleges and universities participating in the Salary Survey. Additional copies of the report can be obtained for \$1.50 each.

Judith O'Flynn Kayser

SCOPE AND NATURE OF THE SURVEY

The scope, nature, and coverage of the CPC Salary Survey are particularly important to the interpretation and proper use of the statistics.

The study surveys a fairly consistent population which includes 183 placement offices at 161 colleges and universities throughout the United States. Offers are reported from employing organizations in business, industry, government, and nonprofit and educational organizations. The offers are base starting salary offers and do not include fringe benefits or overtime. The data cover a broad range of functional positions, except teaching. Confidentiality is maintained for the individual, the college, and the employer.

The Survey reports offers, not acceptances, with no limit on the number of offers per student. Therefore, offers in the study cannot be equated with actual hires, and when the economic climate changes substantially, the ratio of offers to hires usually changes also, making comparison with other years no longer valid. In those categories where offers are relatively few, the data should be regarded only as an indication.

The Survey is available only to members and Salary Survey subscribers of the College Placement Council and is intended for the professional use of its constituents. Reports are issued in December, January, March, and July.

AVERAGE MONTHLY SALARY OFFERS

DECEMBER 1985
PRELIMINARY REPORT - 9/1/85 to 12/6/85

Bachelor's Degree Candidates
(Data Combined for Men and Women)

By Curriculum for All Types of Employers	Number of Offers		Average Dollar Offers			% Change From July	Percentiles		
	December		December		July		90th	50th	10th
	1985	1984	1985	1984	1985				
BUSINESS									
Accounting	711	878	\$1,752	\$1,643	\$1,697	3.2%	\$1,958	\$1,750	\$1,583
Business Administration & Management	97	360	1,623	1,560	1,636	-0.8	2,083	1,600	1,250
Management Information Systems	58	N/A	1,894	N/A	N/A	N/A	2,300	1,875	1,600
Marketing & Distribution	97	207	1,572	1,511	1,548	1.6	2,000	1,575	1,167
HUMANITIES & SOCIAL SCIENCES									
Economics ¹	29	53	1,708	1,434	1,729	-1.2	2,200	1,667	1,333
Humanities	30	98	1,512	1,289	1,461	3.5	1,833	1,500	1,125
Social Sciences	29	156	1,603	1,304	1,545	3.8	2,167	1,500	1,100
ENGINEERING									
Aerospace & Aeronautical	51	45	2,276	2,170	2,230	2.1	2,491	2,325	2,059
Chemical	103	138	2,431	2,329	2,369	2.6	2,550	2,425	2,250
Civil (incl. Construction, Sanitary, & Transportation Engrg.)	105	108	2,014	1,939	1,969	2.3	2,400	2,000	1,755
Electrical (incl. Computer Engrg.)	486	742	2,267	2,203	2,283	-0.7	2,550	2,345	1,930
Geological	5	3	2,051	2,418	2,105	*	*	*	*
Industrial	85	91	2,232	2,126	2,191	1.9	2,425	2,291	1,930
Mechanical	290	395	2,304	2,174	2,259	2.0	2,500	2,333	2,048
Metallurgical (incl. Metallurgy & Ceramic Engrg.)	25	15	2,267	2,179	2,279	-0.5	2,450	2,308	1,930
Mining & Mineral	+	3	+	1,972	2,190	+	*	*	*
Nuclear (incl. Engrg. Physics)	12	13	2,360	2,146	2,283	*	*	*	*
Petroleum	49	52	2,680	2,638	2,583	3.8	2,900	2,750	2,300
Engineering Technology	72	94	2,153	2,149	2,137	0.8	2,400	2,204	1,700
SCIENCES									
Agricultural Sciences	21	17	1,397	1,512	1,474	-5.2	1,650	1,341	1,125
Allied Health Professions	3	66	1,701	1,889	1,780	*	*	*	*
Biological Sciences	7	18	1,912	1,571	1,433	*	*	*	*
Chemistry	14	9	2,195	1,701	1,897	*	*	*	*
Computer Science	196	294	2,167	1,973	2,082	4.1	2,496	2,166	1,850
Mathematics	19	23	1,945	1,940	2,047	*	*	*	*
Other Physical & Earth Sciences	16	26	1,941	1,890	1,945	*	*	*	*
Totals	2,610	3,904							

N/A--No historic data available.

¹Includes economics programs with both business and social science orientation.

*Not computed for fewer than 20 offers.

+No offers reported.

AVERAGE MONTHLY SALARY OFFERS

DECEMBER 1985
PRELIMINARY REPORT - 9/1/85 to 12/6/85

Bachelor's Degree Candidates
(Data Combined for Men and Women)

By Occupational Title for All Types of Employers	Number of Offers		Average Dollar Offers			% Change From July	Percentiles		
	December 1985	December 1984	December 1985	December 1984	July 1985		90th	50th	10th
ADMINISTRATIVE & MANAGEMENT-RELATED OCCUPATIONS									
Accountants & Auditors	694	896	\$1,753	\$1,645	\$1,705	2.8%	\$1,958	\$1,750	\$1,583
Business Administration	32	276	1,779	1,512	1,635	8.8	2,253	1,768	1,250
**Financial Analysts <i>[Finance & Economics]</i>	21	121	1,683	1,627	1,743	-3.4	2,010	1,775	1,225
Management Trainee	98	N/A	1,568	N/A	N/A	N/A	2,140	1,500	1,150
Personnel & Labor Relations	6	18	1,598	1,726	1,680	*	*	*	*
COMPUTER & MATHEMATICAL OCCUPATIONS									
Computer Programmers	112	N/A	2,072	N/A	N/A	N/A	2,430	2,080	1,750
**Computer Scientists (incl. Systems Analysts) <i>[EDP Programming Systems]</i>	134	319	2,134	1,996	2,107	1.3	2,433	2,165	1,750
Mathematicians/Statisticians	13	24	1,796	1,916	1,938	*	*	*	*
MARKETING & SALES OCCUPATIONS									
**Advertising/Marketing <i>[Merchandising Sales Promotion]</i>	39	193	1,635	1,415	1,501	8.9	2,083	1,700	1,100
**Retail/Wholesale Sales <i>[Sales—Nontechnical Degree]</i>	97	145	1,637	1,505	1,593	2.8	2,000	1,583	1,250
Technical Sales	18	10	1,861	2,050	2,167	*	*	*	*
ALL OTHER OCCUPATIONS									
Communications Occupations	16	78	1,814	1,174	1,635	*	*	*	*
Engineers (Engrg. Degree Required)	1,246	1,589	2,281	2,200	2,265	0.7	2,550	2,333	1,930
Farm & Natural Resources Management	4	10	1,320	1,488	1,466	*	*	*	*
Health-Related Occupations	9	72	1,568	1,847	1,704	*	*	*	*
Insurance & Real Estate Occupations	5	N/A	1,597	N/A	N/A	N/A	*	*	*
**Production Occupations <i>[Manufacturing & or Industrial Operations]</i>	23	42	1,913	1,971	2,082	-8.1	2,425	2,037	1,250
Researchers--Nonscientific	7	19	1,883	1,782	1,882	*	*	*	*
Researchers--Scientific	30	32	2,108	1,957	2,030	3.8	2,550	2,100	1,700
**Social Workers & Recreational Workers <i>[Community & Service Orgs. Work]</i>	4	25	1,361	1,573	1,268	*	*	*	*
Transportation & Distribution Occupations	2	N/A	1,417	N/A	N/A	N/A	*	*	*
Totals	2,610	3,869 [#]							

**Category name changed; the bracketed name indicates former category, on which historical data are based. See page 8.

N/A--No historic data available.

*Not computed for fewer than 20 offers.

[#]Total does not include the categories of Rotational Training--Technical and Nontechnical, which have been deleted from this year's report.

AVERAGE MONTHLY SALARY OFFERS

DECEMBER 1985

PRELIMINARY REPORT - 9/1/85 to 12/6/85

(Data Combined for Men and Women)

Master's Degree Candidates
Inexperienced (One year or less
of full-time, nonmilitary employment)

Graduate Program	Number of Offers		Average Dollar Offers			% Change From July	90th	Percentiles		10th
	December		December		July			50th		
	1985	1984	1985	1984	1985					
BUSINESS										
Accounting	51	83	\$2,007	\$2,067	\$2,055	-2.3%	\$2,333	\$2,042	\$1,650	
MBA--Nontechnical Undergraduate	55	96	2,121	2,093	2,382	-11.0	2,417	2,167	1,667	
MBA--Technical Undergraduate	11	15	2,359	2,453	2,537	*	*	*	*	
MS--Business (incl. Management, Marketing, Finance, etc.)	5	14	2,475	2,177	2,454	*	*	*	*	
Administration (incl. Public Hospital, etc.)	+	9	+	2,158	2,223	+				
Industrial Management (incl. Industrial Administration)	1	3	2,000	2,198	2,405	*	*	*	*	
HUMANITIES & SOCIAL SCIENCES										
Humanities	+	7	+	1,617	1,514	+				
Social Sciences	3	32	1,363	1,629	1,771	*	*	*	*	
ENGINEERING										
Chemical	4	9	2,613	2,331	2,596	*	*	*	*	
Civil (incl. Construction, Sanitary, & Transportation Engrg.)	9	30	2,337	2,242	2,363	*	*	*	*	
Electrical (incl. Computer Engrg.)	22	88	2,837	2,679	2,727	4.0	3,033	2,929	2,558	
Industrial	3	5	2,755	2,246	2,469	*	*	*	*	
Mechanical	22	44	2,744	2,417	2,621	4.7	3,000	2,713	2,415	
Metallurgical (incl. Metallurgy & Ceramic Engrg.) ¹	3	6	2,556	2,531	2,517	*	*	*	*	
Nuclear (incl. Engrg. Physics)	+	4	+	2,495	2,582	+				
SCIENCES										
Chemistry	2	2	2,605	1,916	2,177	*	*	*	*	
Computer Science	21	49	2,530	2,558	2,584	-2.1	3,000	2,583	2,000	
Geology & Related Geological Sciences	8	15	2,556	2,552	2,572	*	*	*	*	
Mathematics	4	2	2,265	2,600	2,337	*	*	*	*	
Totals	224	513								

*Not computed for fewer than 20 offers.

+No offers reported.

¹Previously reported under SCIENCES heading.

AVERAGE MONTHLY SALARY OFFERS

DECEMBER 1985
PRELIMINARY REPORT - 9/1/85 to 12/6/85
(Data Combined for Men and Women)

Master's Degree Candidates
Experienced¹

Graduate Program	Number of Offers		Average Dollar Offers			% Change From July	90th	Percentiles	
	December		December		July			50th	10th
	1985	1984	1985	1984	1985				
Over 1 to 2 years									
MBA--Nontechnical Undergraduate	5	22	\$1,858	\$2,311	\$2,690	*	*	*	*
MBA--Technical Undergraduate	+	2	+	2,645	2,812	+			
Over 2 to 4 years									
MBA--Nontechnical Undergraduate	5	11	2,128	2,637	2,840	*	*	*	*
MBA--Technical Undergraduate	2	2	2,743	2,625	2,934	*	*	*	*
Over 4 years									
MBA--Nontechnical Undergraduate	3	18	2,056	2,639	2,845	*	*	*	*
MBA--Technical Undergraduate	+	3	+	3,151	2,913	+			
Totals	15	58							

DOCTORAL DEGREE CANDIDATES

ENGINEERING

Chemical	4	3	\$3,469	\$3,367	\$3,405	*	*	*	*
Civil (incl. Construction, Sanitary, & Transportation Engrg.)	+	1	+	2,000	2,507	+			
Electrical (incl. Computer Engrg.)	9	7	3,981	3,393	3,542	*	*	*	*
Mechanical	8	9	3,579	2,863	3,168	*	*	*	*
Metallurgical (incl. Metallurgy, Materials Engrg., & Science & Ceramics)	9	4	3,501	2,992	3,260	*	*	*	*

SCIENCES

Chemistry	14	10	3,197	2,769	3,032	*	*	*	*
Mathematics (incl. Oprs. Research, Statistics, & Actuarial Science)	+	4	+	2,125	2,977	+			
Physics	10	8	3,618	3,174	3,176	*	*	*	*
Totals	54	46							

¹Years of previous full-time, nonmilitary employment.

*Not computed for fewer than 20 offers.

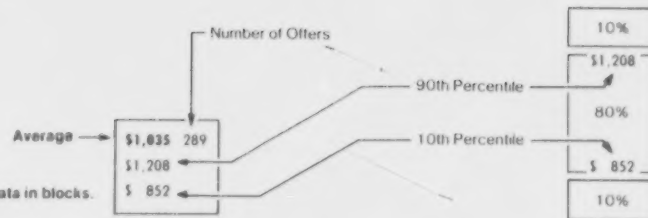
+No offers reported.

²Previously reported under SCIENCES heading.

Monthly beginning salary offers to all candidates by curriculum and employer

Preliminary Report ■ December 1985 ■ Data combined for men and women*

This diagram indicates arrangement of data in blocks.



The 90th and 10th percentiles are those salary offers between which 80 percent of the offers in a category are located. Not computed for fewer than 20 offers.
10 percent of the salary offers are higher than the 90th percentile.
10 percent of the salary offers are lower than the 10th percentile.

		BUSINESS			MANUFACTURING ■ INDUSTRIAL												GOVT ■ NON-PROFIT		
CURRICULUM		Accounting—Public	Banking, Finance & Insurance	Merchandising (Retail & Wholesale) & Services	Aerospace	Automotive & Mechanical Equipment	Building Materials Mfrs. & Construction	Chemicals, Drugs, & Allied Products	Computers & Business Machines	Electrical & Electronic Mach. & Equip.	Food & Beverage Processing	Glass, Paper, Packaging & Allied Products	Metals & Metal Products	Petroleum & Allied Products (incl. Nat. Gas)	Research &/or Consulting Organizations	Utilities—Public (incl. Transportation)	Federal Government	Local/State Government	Non Profit Orgs. & Educational Institutions
NON-TECHNICAL	BACHELOR'S DEGREE																		
	Accounting	\$1,764 607 \$1,958 \$1,608	\$1,535 16	\$1,496 14	\$1,763 13	\$1,804 2		\$1,954 2	\$1,734 1	\$1,830 4	\$1,639 3	\$1,800 2	\$1,608 2	\$1,866 18		\$1,771 11	\$1,409 3	\$1,581 13	
	Business Administration (incl. Mgmt.)		\$1,560 25 \$1,917 \$1,250	\$1,491 30 \$1,830 \$1,200	\$1,926 8	\$1,700 1	\$1,870 2	\$1,810 1	\$1,691 7	\$2,158 2	\$1,766 5	\$1,901 4		\$1,705 3	\$1,090 2	\$1,540 3	\$1,493 2	\$1,836 1	\$1,766 1
	Management Information Systems	\$1,827 6	\$1,737 13	\$1,803 8	\$2,048 4			\$2,550 1	\$2,142 4	\$2,021 4	\$2,175 1	\$1,750 2	\$1,863 2	\$2,074 4	\$1,808 4	\$2,054 2		\$1,773 1	\$1,833 2
	Marketing & Distribution	\$1,500 1	\$1,509 2	\$1,521 57 \$2,000 \$1,083	\$1,542 2	\$1,730 2	\$1,500 1	\$1,649 7	\$1,649 6	\$1,751 6	\$1,562 5	\$1,875 1	\$1,667 1	\$1,916 1	\$2,000 1	\$1,505 4			
	Economics	\$1,834 4	\$1,657 13	\$1,576 8	\$1,800 1	\$3,083 1					\$1,576 1				\$1,600 1				
	Humanities		\$1,396 2	\$1,451 15				\$1,500 1	\$1,542 1	\$1,722 3	\$1,917 1					\$1,708 1	\$1,199 1	\$1,318 2	\$1,717 3
	Social Sciences		\$1,229 2	\$1,704 15	\$1,814 2		\$1,417 1			\$2,054 1	\$1,500 2	\$1,759 2						\$1,175 1	\$1,228 3
MASTER'S DEGREE—INEXPERIENCED																			
MBA—Nontechnical Undergraduate Degree		\$2,159 22 \$2,417 \$1,917	\$2,058 16	\$1,842 5		\$2,000 1		\$2,915 1	\$2,190 1	\$2,333 1	\$2,004 2			\$2,528 3		\$1,906 2	\$2,181 1		
MBA—Technical Undergraduate Degree		\$2,209 2		\$2,530 2	\$1,917 1			\$2,420 1		\$2,625 1				\$2,450 3			\$2,157 1		
BACHELOR'S SUMMARY																			
Nontechnical Curricula		\$1,765 618 \$1,958 \$1,608	\$1,588 73 \$2,000 \$1,125	\$1,542 147 \$2,000 \$1,125	\$1,834 30 \$2,200 \$1,625	\$1,975 6	\$1,664 4	\$1,776 12	\$1,767 19	\$1,870 20 \$2,100 \$1,667	\$1,679 18	\$1,827 11	\$1,721 5	\$1,881 26 \$2,000 \$1,725	\$1,627 8	\$1,712 21 \$2,050 \$1,500	\$1,402 6	\$1,554 18	\$1,585 9
Technical Curricula		\$2,054 14	\$1,712 15	\$2,878 31 \$2,500 \$1,600	\$2,318 383 \$2,517 \$2,097	\$2,313 78 \$2,558 \$2,037	\$2,000 71 \$2,400 \$1,600	\$2,387 118 \$2,550 \$2,167	\$2,281 39 \$2,550 \$2,000	\$2,304 233 \$2,500 \$2,083	\$2,102 40 \$2,550 \$1,375	\$2,373 44 \$2,550 \$2,225	\$2,205 23 \$2,450 \$1,875	\$2,539 130 \$2,850 \$2,125	\$2,190 43 \$2,450 \$1,920	\$2,299 84 \$2,500 \$2,000	\$1,876 162 \$2,167 \$1,559	\$1,835 42 \$2,100 \$1,515	\$1,706 9

*Data in block tables are for period 9/1/85 through 12/6/85

*Category name change. See page 9

*New Category. See page 9

Bachelor's Degree		MANUFACTURING ■ INDUSTRIAL												GOV'T ■ NON-PROFIT		
CURRICULUM	BUSINESS															Federal Government
	Accounting— Public	Banking, Finance, & Insurance	Merchandising (Retail & Wholesale & Services)	Aerospace	Automotive & Mechanical Equipment	Building Materials Mills & Construction	Chemicals, Drugs, & Allied Products	Computers & Business Machines	Electrical & Electronic Mach. & Equip.	Food & Beverage Processing	Glass, Paper, Packaging, & Allied Products	Metals & Metal Products	Petroleum & Allied Products (incl. Nat. Gas)	Research &/or Consulting Organizations	Utilities— Public (incl. Transportation)	
Aerospace & Aeronautical Engineering				\$2,361 33 \$2,500 \$2,204	\$2,350 1	\$1,853 3		\$2,550 1	\$2,211 8							\$1,928 4
Chemical Engineering				\$2,247 3	\$2,694 3	\$2,565 1	\$2,426 40 \$2,510 \$2,300		\$2,332 7	\$2,462 7	\$2,460 14		\$2,553 20 \$2,608 \$2,335	\$2,286 3	\$2,350 1	\$1,865 3
Civil Engineering (incl. Construction, Sanitary, & Transportation Engr.)				\$2,411 5		\$1,965 40 \$2,167 \$1,755	\$2,045 1	\$2,350 1	\$2,258 1		\$2,300 1	\$1,667 1	\$2,716 6	\$2,029 13	\$2,111 7	\$1,929 7
Electrical Engineering (incl. Computer Engr.)	\$2,004 2	\$1,667 1	\$2,247 7	\$2,377 136 \$2,578 \$2,167	\$2,418 18	\$2,330 6	\$2,410 9	\$2,399 19	\$2,349 116 \$2,520 \$2,167	\$2,667 2	\$2,402 3	\$2,394 3	\$2,473 10	\$2,490 12	\$2,397 36 \$2,526 \$2,200	\$1,869 97 \$2,167 \$1,558
Geological Engineering						\$1,900 1									\$2,433 1	\$1,977 3
Industrial Engineering	\$2,111 3			\$2,254 9	\$2,260 8	\$1,550 1	\$2,303 18	\$2,030 2	\$2,245 9	\$2,376 6	\$2,274 13	\$2,145 5		\$1,920 1	\$2,391 5	\$1,858 5
Mechanical Engineering		\$1,875 1	\$2,300 1	\$2,358 88 \$2,500 \$2,208	\$2,298 31 \$2,558 \$2,040	\$2,006 10	\$2,422 24 \$2,500 \$2,335		\$2,320 42 \$2,560 \$2,100	\$2,288 11	\$2,382 11	\$2,262 5	\$2,564 19	\$2,300 2	\$2,360 15	\$1,951 26 \$2,095 \$1,575
Metallurgical Engineering (incl. Metallurgy & Ceramic Engr.)				\$2,254 6	\$2,300 5		\$2,272 3		\$2,400 5		\$2,325 1	\$2,371 2		\$2,100 1		\$1,838 2
Mining & Mineral Engineering																
Nuclear Engineering (incl. Engrg. Physics)				\$2,383 1		\$2,250 1	\$2,415 2		\$2,383 2					\$2,300 1	\$2,358 5	
Petroleum Engineering		\$2,000 1	\$2,000 1		\$2,300 1				\$2,700 1				\$2,701 44 \$2,900 \$2,400		\$2,700 1	
Engineering Technology		\$1,513 2		\$2,213 38 \$2,500 \$1,833	\$2,136 5	\$2,147 5		\$2,145 2	\$2,094 12				\$3,000 1		\$2,300 1	\$1,846 2
Agricultural Sciences		\$1,279 2	\$1,500 1		\$1,250 1	\$1,300 1	\$2,167 1			\$1,454 11						\$1,099 1
Allied Health Professions									\$2,000 1							\$1,340 1
Biological Sciences	\$1,791 1						\$2,394 3								\$1,470 3	
Chemistry			\$1,000 1				\$2,350 7			\$2,375 1			\$2,025 4	\$2,000 1		
Computer Science	\$2,058 8	\$1,779 6	\$2,088 17	\$2,188 55 \$2,450 \$1,885	\$2,311 4	\$2,040 2	\$2,554 6	\$2,189 13	\$2,232 28 \$2,500 \$1,898	\$1,862 2	\$2,375 1	\$2,156 7	\$2,307 22 \$2,655 \$2,125	\$2,002 7	\$2,000 9	\$2,051 6
Mathematics		\$1,930 2	\$1,750 2	\$2,153 6				\$1,700 1					\$2,396 2	\$1,917 1		\$1,519 3
Other Physical & Earth Sciences			\$1,290 1	\$2,282 3	\$2,250 1		\$2,150 4		\$1,504 1				\$1,900 2	\$2,200 1		\$1,522 3

*Category name change. See page 9.

*New Category. See page 9.

OCCUPATIONAL CLASSIFICATION DEFINITIONS

ADMINISTRATIVE & MANAGEMENT-RELATED OCCUPATIONS

Accountants & Auditors - Includes occupations primarily concerned with planning and administering accounting services, advising on accounting problems, and planning and conducting audits of accounts of industrial, governmental, and other organizations and private individuals

Business Administration - Includes all nontechnical positions of a management and management-support nature such as administrative assistant, purchasing agent, secretaries (4-year degree), etc. Supervisors of production occupations are classified under Production Occupations

Financial Analysts - [Formerly Finance & Economics on which December 1984 and July 1985 data are based] Includes occupations involving examining, analyzing, and interpreting financial data affecting investment programs. May perform research and make analyses relative to losses and adverse financial trends and suggest remedial measures

Management Trainee - Performs duties under direction of experienced personnel to gain knowledge and experience required for promotion to managerial position

Personnel & Labor Relations - Includes occupations primarily concerned with implementing management policies related to personnel administration and labor relations by performing activities such as representing management or labor in collective bargaining procedures, participating in programs of recruitment, selection, placement, training, compensation, and promotion and separation, and conducting vocational training, rehabilitation, and other employment development programs

COMPUTER & MATHEMATICAL OCCUPATIONS

Computer Programmers - [Formerly included under the combined category of EDP-Programming/Systems. It is now presented as a separate category] Includes occupations concerned with writing specific programs by breaking down each step into a series of coded instructions using one of the languages developed especially for computers. Also includes testing the operation of the programs, and preparing instruction sheets for the computer operator who will run the programs

Computer Scientists (incl. Systems Analysts) - [Formerly included under the combined category of EDP-Programming/Systems on which December 1984 and July 1985 data are based] Includes occupations concerned with utilization of the computer in the analysis and solution of business, scientific, engineering, and other technical problems. Includes analyzing computer

systems, and providing advice on availability and use of electronic data processing resources, capabilities, and technological development

Mathematicians/Statisticians - Includes occupations concerned with the development of methodology in mathematical concepts, mathematical statistics, and the application of original and standardized mathematical techniques to the solution of specific problems and situations. Includes the use of statistical tools for planning and conducting surveys and censuses, developing questionnaires, evaluating reliability of sources of data, preparing tables and graphs, and writing reports on sources of data. Also includes positions involving the application of mathematics, probability, statistics, principles of finance and business to problems in life, health, social, and casualty insurance, annuities, and pensions

MARKETING & SALES OCCUPATIONS

Advertising/Marketing - [December 1984 and July 1985 data are from the former category Merchandising Sales Promotion] Includes occupations concerned with planning, organizing, and directing advertising activities as well as occupations involving soliciting business for display or classified advertising, selling art work to advertising agencies or individual firms for use in composing advertising material, and selling advertising time on radio and television programs. Also includes occupations concerned with formulating marketing policies, identification of target markets, conducting market research, and directing sales activities of an organization

Retail/Wholesale Sales - [December 1984 and July 1985 data are from former category Sales—Non-technical] Includes occupations concerned with selling commodities in wholesale and retail establishments as well as occupations involving selling products of manufacturers to wholesale and retail establishments

Technical Sales - Includes occupations concerned with sales activities requiring specialized knowledge of the technology of the composition, utilization, and maintenance of the goods or equipment sold, selling scientific and technical products and services of a chemical, mechanical, electrical, or electronic nature or light, heat, and power services, advising customers on the application, installation, and operation of technical equipment, and preparing or arranging for preparation of financial and operational estimates to show cost reduction or efficiency increase resulting from proposed changes in materials, machines, or methods

ALL OTHER OCCUPATIONS

Communications Occupations - Includes occupations involving editing, writing, reporting news items and

features, announcing, and publishing of all types. It also includes occupations involving promoting or creating goodwill for individuals or organizations by writing or selecting favorable material and releasing it through various communications media. Not included is public relations work involved with marketing a product or service. Those occupations would be classified in the category of Advertising/Marketing

Engineers (Engineering Degree Required) - Includes occupations concerned with the application of physical laws and principles of engineering for the development and utilization of machines, materials, instruments, processes, and services. Engineering technologists are also included in this group

Farm & Natural Resources Management - Includes agriculture and food scientists involved in the application of scientific principles to problems related to food and fibre, and horticulture. Also includes forestry and conservation scientists involved in the development, production, conservation, and utilization of the natural resources of forests, protection of resources against fire, insects, diseases, floods, and erosion, discovery and interpretation of principles and facts upon which the management of forest land rests, and development of new, improved, or more economic scientific methods, practices, techniques, and instruments necessary to perform such work

Health-Related Occupations - Includes occupations in the allied medical professions such as physical, occupational, music, and speech therapists, also medical technologists, medical laboratory assistants, and nurses (4-year degree)

Insurance & Real Estate Occupations - Includes occupations involving selling life, endowment, fire, accident, and other types of insurance to clients, and determining if applicants are good risks. This group also includes occupations involving renting, buying, selling, and appraising property on behalf of clients

Production Occupations - [Formerly Manufacturing &/or Industrial Operations on which December 1984 and July 1985 data are based] Includes occupations concerned with actual production operations, such as production planning, scheduling, expediting, or quality control. It also includes occupations concerned with the supervising of these functions

Researchers-Nonscientific - Includes occupations involving research in nonscientific areas such as opinion research, media and editorial research, and paralegal positions

Researchers-Scientific - Includes occupations concerned with the application of scientific knowledge to the conduct of research and development

Social Workers & Recreational Workers - [Formerly Community & Service Organizations Work on which December 1984 and July 1985 data are based]

(Continued)

Includes occupations involving counseling and giving aid to individuals and families requiring assistance of social service agencies. Also included are occupations involving organizing and supervising social, recreational, and cultural activities.

EMPLOYER CLASSIFICATION DEFINITIONS

BUSINESS

Accounting - Includes firms engaged primarily in public accounting.

Banking, Finance, & Insurance - Includes finance firms such as banks and trust companies, other credit agencies, holding (but not predominantly operating) companies, other investment companies, brokers, and securities and commodity firms. All types of insurance firms, agents, and brokers, and real estate agencies, title companies, and developers are also included.

Merchandising & Services - Includes establishments engaged in services other than manufacturing products. Examples are: retail/wholesale establishments, distributors of all types, hotels, restaurants, amusement, entertainment, and recreational facilities (other than government), advertising agencies, car rental agencies, printing and publishing firms, media services (i.e., radio, television, newspaper), equipment repair and maintenance services, computer services (i.e., systems analysis, software time sharing, data processing).

MANUFACTURING

Aerospace - Includes establishments primarily engaged in manufacturing guided missiles and space vehicles and other aerospace equipment and related components. Research and development and other services on or for guided missiles and space vehicles are included in this industry.

Automotive & Mechanical Equipment - Includes establishments primarily engaged in manufacturing or assembling passenger automobiles, trucks, commercial cars and buses, and special purpose motor vehicles. Manufacturers of parts and accessories for this equipment are also included. Also included are establishments engaged in manufacturing machinery and equipment powered by built-in or detachable motors with the exception of electrical household appliances. Included are: engines and turbines; farm and garden machinery and equipment; construction machinery and equipment; industrial mechanical equipment having detachable electric motors such as pumps, refrigeration, heating, and ventilation equipment.

Building Materials Mfrs. & Construction - Includes establishments primarily engaged in the construction of dwellings, office buildings, stores, farm buildings, and other projects of a similar character. Additionally, contractors of heavy construction (i.e., bridges, highways, dams, etc.) are included. Establishments engaged in the manufacture of building materials also belong in this category.

Transportation & Distribution Occupations - Includes occupations concerning the operating and controlling of equipment used to transport people or materials using vehicles. It includes actual delivery, physical

Chemicals, Drugs, & Allied Products - Includes establishments producing basic chemicals and manufacturing products by predominantly chemical processes to be used for the following: 1) in further manufacture (i.e., plastics, synthetic fibers, dyes); 2) for ultimate consumption (i.e., drugs, cosmetics, soaps); 3) as supplies for other industries (i.e., paints, fertilizers, pesticides, explosives).

Computers & Business Machines - Includes establishments primarily engaged in manufacturing electronic computers and peripheral equipment intended for use in electronic computer systems. Electronic computer systems contain high-speed arithmetic and program control units, on-line information storage, devices, input/output equipment, terminals, data communication devices, and punched card equipment. In addition to providing technical manuals necessary for the operation and maintenance of the equipment, establishments in this industry usually furnish general-purpose computer programs and basic operating systems programs needed for effective use of the computer system. Establishments primarily engaged in manufacturing desk calculators, cash registers, accounting machines, and similar equipment are also to be included in this category.

Electrical & Electronic Machinery & Equipment (incl. Communications Equipment) - Includes establishments engaged in manufacturing machinery, apparatus, and supplies for the generation, storage, transmission, transformation, and utilization of electrical energy. This category also includes manufacturers of electronic communication and detection equipment, as well as electronic components—more specifically, electronic radio, telephone, telegraph, and television equipment and components, semiconductors, and circuits. The manufacture of household appliances is included in this group, but industrial machinery and equipment powered by built-in or detachable electric motors is classified in Automotive and Mechanical Equipment.

Food & Beverage Processing - Includes establishments manufacturing or processing foods and beverages for human consumption, and certain related products, such as tobacco, manufactured ice, chewing gum, vegetable and animal fats and oils, and prepared feeds for animals and fowls.

Glass, Paper, Packaging, & Allied Products - Includes manufacturers of 1) glass containers, flat glass, glassware, and other glass products (i.e., droppers, test tubes, ornaments, etc.); 2) pulp, paper, and paper products (i.e., tissues, cardboard, bags, envelopes); 3)

transportation, warehousing, and storage. Includes such positions as utilities dispatchers, flight attendants, pilots, traffic controllers, distribution managers, and traffic managers.

packaging materials made of glass, paper (i.e., boxes, cartons, tubes) as well as plastic and metal containers.

Metals & Metal Products - Includes establishments engaged in the smelting and refining of ferrous and nonferrous metals from ore, pig, or scrap; in the rolling, drawing, and alloying of ferrous and nonferrous metals; in the manufacture of castings and other basic products of ferrous and nonferrous metals; and in the manufacture of nails, spikes, and insulated wire and cable.

Petroleum & Allied Products (incl. Natural Gas) - Includes establishments primarily engaged in exploration, drilling, well operation and maintenance, operation of cycle plants for both oil and natural gas, and mining and extraction of oil from oil sands and oil shale. This group also includes establishments engaged in petroleum refining, manufacturing paving and roofing materials, and compounding lubricating oils and greases from purchased materials.

Research &/or Consulting - Includes establishments primarily engaged in laboratory or other physical research and development on a contract or fee basis. Also included are establishments primarily engaged in furnishing a wide variety of general or specialized consulting services in any field. Include engineering firms where design and construction are not part of the firm's responsibilities. Not included are research and development laboratories of companies which manufacture the products developed from their research activities. These are classified the same as the manufacturing establishments they serve.

Utilities—Public (incl. Transportation) - Includes establishments engaged in the generation, transmission, and/or distribution of electricity or gas or steam. Such establishments may be combinations of any of the above three services. Also included are establishments providing transportation (trucking, railroads, airlines, package delivery, shipping [water]).

GOVERNMENT & NONPROFIT

Federal Government - Includes all Federal agencies and civilian positions with the armed services.

Local/State Government - Includes all township, county, city, and state government positions.

Nonprofit & Educational Institutions - Includes nonprofit organizations of all types no matter what the service or product. It also includes establishments furnishing formal academic or technical courses, correspondence schools, commercial and trade schools, and libraries.